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			2151	

DATE MAILED: 04/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/943,964

Applicant(s)

CORNELIUS ET AL.

Examiner

KAMAL B. DIVECHA

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02/22/2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claims 1-23 are pending in this Office Action.

Response to Arguments

Applicant has amended the drawings and specification; therefore the examiner withdraws prior objections.

Applicant has amended claims 9-12, 14 and 17; therefore, the examiner withdraws prior 35 U. S. C. 112, 2nd paragraph rejections.

Applicant has amended claims 1, 13 and 22.

Applicant's arguments with respect to claims 22-23, 1-5, 8-12, and 13-21 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

1. Claims 1 and 8-12 are rejected under 35 U.S.C. 102(e) as being anticipated by Sato et al., (hereinafter Sato, U. S. Patent No. 6,718,482 B2).

As per claim 1, Sato discloses a remote data processing system (fig. 1 item #101) comprising: a data receiver for receiving a data message (fig. 1 item #110); a remote software module arranged to receive the data message from the data receiver, the remote software module including at least a first stage software component cascaded with a second stage software

component (fig. 1 item #105, #112 and col. 1 L35-67; col. 2 L48-55); and a fault detector associated with the first software stage component and the second software stage component to detect a fault in the remote software module by detecting whether the data message or a derivative thereof flows through at least one of the first stage software component and the second stage software component (fig. 1 item #115, fig. 13 item #1301 and fig. 16 item #1602, 1605, fig. 8 and col. 8 L28-52; col. 5 L32-56).

As per claim 8, Sato discloses the fault detector having logical connections including a connection with an input of the first software stage component, an output of the first software stage component, and an output of second software stage component (fig. 1 item #101).

As per claim 9, Sato discloses the fault detector that identifies the first software stage as a faulty software component if the data message is present at an input of the first software stage, but not the output of the first software stage (col. 8 L27-52).

As per claim 10, Sato discloses the fault detector that identifies the second software stage as a faulty software component if the data message is present at an input of the second software stage, but not the output of the second software stage (col. 8 L27-52).

As per claim 11, Sato discloses the fault detector that identifies the first software stage as a faulty software component if a derivative of the data message (interpret as a data message) is present at an input of the first software stage, but not the output of the first software stage (col. 8 L27-52).

As per claim 12, Sato discloses the fault detector that identifies the second software stage as a faulty software component if a derivative of the data message (read as data message) is

present at an input of the second software stage, but not the output of the second software stage (col. 8 L27-52).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

2. Claims 13-14 and 18 are rejected under 35 U.S.C. 103(a) as being obvious over Sato et al., (hereinafter Sato, U. S. Patent No. 6,718,482 B2).

As per claim 13, Sato discloses a method for monitoring a remote data processing system (see abstract), the method comprising: having a remote data processing system receiving collecting command from a monitoring system (read as base data processing system) via a communications network that is external to the remote data processing system (fig. 1 item #115, 101 and 114 and fig. 12 item #1202); cascading at least a first stage software component and a second stage software component to form an installed remote software module of the remote data

processing system for accepting the received message (fig. 1 item #112, #105 and col. 1 L35-67); detecting the data message or a derivative at a group of logical nodes within the installed remote software module to determine flow of the data message, or a derivative thereof, between the logical nodes and hence, flow through at least one of the first stage software component and the second stage software component (col. 8 L28-52 and fig. 8 item #801); and identifying a deficient software component of the installed remote software module as any of said software stage components that blocks or disrupts the flow of the data message between two adjacent logical nodes (fig. 8 item #801 and item #803 and col. 8 L28-52), however Sato does not explicitly disclose the process of receiving a data message from a base data processing system. But as set forth above, Sato's remote data processing system is capable of receiving data messages from other data processing system. Therefore, it would have been obvious to a person of ordinary skilled in the art at the time the invention was made to modify Sato wherein remote data processing system receives a data message from a base data processing system. One of ordinary skilled in the art would have been motivated because it would created a central fault monitoring system from where the fault detecting messages would have been transmitted to other monitored data processing systems for detecting faults in the software modules.

As per claim 14, Sato discloses passing a data message, from at least an input of the installed remote software module to an output of the installed remote software module to indicate that the installed remote software module is operational (fig. 1 item #109 and #112 and fig. 8), however Sato does not disclose passing a status code, distinct from the data message through the installed remote software module. But, it would have been obvious to a person of ordinary skilled in the art at the time the invention was made to modify Sato to pass a status code instead

of passing the data message from at least an input of the installed remote software module to an output of the installed remote software module to indicate that the installed remote software module is operational. One of ordinary skilled in the art would have been motivated because it would have detected faults in the software module (Sato, col. 8 L28-52).

As per claim 18, Sato discloses the process of determining that one of the at least a first stage software component and a second stage software component immediately following the last detected data message is at fault (fig. 16 and col. 8 L28-52).

3. Claims 2-5 and 19-21 are rejected under 35 U.S.C. 103(a) as being obvious over Sato et al., (hereinafter Sato, U. S. Patent No. 6,718,482 B2) in view of Hirosawa et al., (hereinafter Hirosawa, U. S. Patent No. 5,237,677).

As per claim 2, Sato does not explicitly disclose a remote status reporter for reporting a status message on at least one of the remote software module and hardware of the remote data processing system.

Hirosawa, from the same field of endeavor, discloses a remote status reporter for reporting a status message of the remote software module and hardware of the remote software module (col. 8 L36-67 to col. 9 L1-6). Therefore, it would have been obvious to a person of ordinary skilled in the art at the time the invention was made to incorporate the teaching of Hirosawa as stated above with the Sato's system in order to report the status message of the remote software module and hardware of the remote software module. One of ordinary skilled in the art would have been motivated because it would have provided an indication of the operational status of the software and hardware modules.

As per claim 3, Sato does not disclose a database for storing detected faults, stage identifiers, and fault descriptions outputted by the fault detector. Hirosawa explicitly discloses a database for storing detected faults, stage identifiers, and fault descriptions outputted by the fault detector (fig. 1 item #256 and fig. 2). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the teaching of Hirosawa as stated above with the Sato's system in order to store the detected faults, stage identifiers and fault descriptions. One of ordinary skill in the art would have been motivated because it would have provided an efficient storage and retrieval of the information regarding the detected faults, which would have been used in further analysis.

As per claim 4, Sato does not explicitly disclose a database for storing status data on corresponding components of a remote data processing system. Hirosawa explicitly discloses a database for storing status data on corresponding components of a remote data processing system (fig. 1 item #104 and col. 8 L. 50-52). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the teaching of Hirosawa as stated above with the Sato's system in order to store status data of components of a data processing system. One of ordinary skill in the art would have been motivated because of the same reasons as set forth above in claim 3.

As per claim 5, Sato does not explicitly disclose a database and the fault detector logging one or more error messages into the database. Hirosawa explicitly discloses a database and the process where fault detector logs one or more error messages into the database (fig. 1 item #256 and col. 4 L9-17). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the teaching of Hirosawa as stated above with

the Sato's system in order to log the error messages into the database. One of ordinary skilled in the art would have been motivated because of the same reasons as set forth above in claim 3.

As per claims 19-21, they do not teach or further define over the claims 2-5. Therefore, claims 19-21 are rejected for the same reasons as set forth above in claims 2-5.

4. Claims 6-7 are rejected under 35 U.S.C. 103(a) as being obvious over Sato et al., (hereinafter Sato, U. S. Patent No. 6,718,482 B2) in view of Gephardt (U. S. Patent No. 5,175,820).

As per claim 6, Sato does not explicitly disclose a feedback generator associated with a remote software module, the feedback generator receiving a status code outputted from the remote software module and forwarding the status code to a transmitter for transmission via a communications network.

Gephardt, from the same field of endeavor, discloses a feedback generator receiving a status code outputted from the module and forwarding the status code to a transmitter for transmission (fig. 3 and col. 5 L44-66; col. 2 L18-45). Therefore, it would have been obvious to a person of ordinary skilled in the art at the time the invention was made to incorporate the teaching of Gephardt as stated above with the Sato's system in order to receive a status code outputted from the software module and forward the status code to a transmitter for transmission. One of ordinary skilled in the art would have been motivated because it would have identified an appropriate operational mode for communication and for controlling communications with plurality of devices (Gephardt, col. 2 L29-52).

As per claim 7, Sato does not explicitly a feedback generator generating a status code for transmitter upon the detection of status code from the remote software module. Gephardt

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discloses a feedback generator generating a status code (fig. 3 and col. 5 L. 60-66). Therefore, it would have been obvious to a person of ordinary skilled in the art at the time the invention was made to modify Gephardt and the combine the modification with Sato's system in order to generate the status code for a transmitter upon detection of status code from remote software module. One of ordinary skilled in the art would have been motivated because of the same reasons as set forth in claim 6 above.

5. Claims 15-16 and 22 are rejected under 35 U.S.C. 103(a) as being obvious over Sato et al., (hereinafter Sato, U. S. Patent No. 6,718,482 B2) in view of Sastry et al., (hereinafter Sastry, U. S. Patent No. 5,768,300).

As per claim 15, Sato does not explicitly disclose the process of passing a status code from at least an input of the communication network to an output of the communications network to indicate that the communication network is operational. Sastry teaches the process of transmitting a test packet (read as passing status code) from a test source along a node path in the network in order to test the entire network (col. 2 L38-50). Therefore, it would have been obvious to a person of ordinary skilled in the art at the time the invention was made to modify Sastry to pass the status code through the communication network to indicate that the communication network is operational. One of ordinary skilled in the art would have been motivated because it would have tested the communication network by sending the test packets from a source node to the network (Sastry, col. 2 L38-50).

As per claim 16, Sato does not explicitly disclose the process of routing the status code from the base data processing system via the communications network to the remote data processing system; and routing the status code from the remote data processing system to the

base data processing system via the communications network to indicate that the continuity of at least one logic path traversed by the status code. Sastry discloses the process of transmitting the status code from one node to another via the communications network (col. 8 L3-4 and col. 3 L2-5); and transmitting the status code from the receiving node to sending node via the communications network (col. 4 L3-9 and col. 7 L5-14). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the teaching of Sastry as stated above with Sato's system and method in order to indicate that the continuity of at least one logic data path traversed by the status code. One of ordinary skill in the art would have been motivated because it would have tested the operating status of the path or link between two nodes.

As per claim 22, Sato discloses a method of monitoring a business-to-business system, the method comprising: inputting the status code into a remote software module of the remote data processing system (fig. 1 item #112 and #109); determining whether the remote software module provides a logical data path of continuity to the status code (fig. 1 item #109 and fig. 8 and fig. 16 illustrates the steps of determining the fault in software module, if there is a fault, no output is outputted); outputting the status code from an output of the remote software module if the determining determines that the remote software module provides a logical data path of continuity to the status code (fig. 8 item #801, fig. 16 item #1602 and fig. 1 item #112), however Sato does not explicitly disclose the process of transmitting a status code from a base data processing system to a remote data processing system via a communications network; receiving the status code at a data receiver in the remote data processing system; and transmitting the outputted status code back to the base data processing system via the communications network as

feedback indicative of the proper end-to-end continuity of communications in a business-to-business environment.

Sastry, from the same field of endeavor, discloses the process of transmitting a status code from one node to another node via a communication network (col. 8 L3-4; col. 3 L1-5); receiving the status code at a data receiver in a data processing system (col. 8 L7-12); and transmitting the status code back to the sending data processing system via the communication network (col. 4 L3-10; col. 7 L5-14). Therefore, it would have been obvious to a person of ordinary skilled in the art at the time the invention was made to modify Sastry and combine with Sato in order to indicate the proper end-to-end continuity of communications in a network environment. One of ordinary skilled in the art would have been motivated because it would have provided a method for efficiently detecting and localizing faults in a network which uses a status message-based link control protocol to control data flow (Sastry, col. 2 L57-64, see abstract).

6. Claim 17 is rejected under 35 U.S.C. 103(a) as being obvious over Sato et al., (hereinafter Sato, U. S. Patent No. 6,718,482 B2) in view of Pocrass (U. S. Patent No. 5,428,806).

As per claim 17, Sato does not explicitly disclose the process of tapping into a logical data path between the first stage software component and the second stage software component to detect whether each of the first and second stage software components are functioning. Pocrass explicitly discloses the process of tapping into the logical data path extending between two modules (col. 18 L54-59). Therefore, it would have been obvious to a person of ordinary skilled in the art at the time the invention was made to incorporate the teaching of Pocrass as

stated above with Sato in view of Sastry's system and method in order to tap into the data path to detect whether the software modules or components are functioning.

One of ordinary skilled in the art would have been motivated because it would have provided an easy way to check the status of the data path, configure, operate and would have maintained the data paths (Pocrass, col. 22 L34-41, col. 3 L26-31).

7. Claim 23 is rejected under 35 U.S.C. 103(a) as being obvious over Sato et al., (hereinafter Sato, U. S. Patent No. 6,718,482 B2) in view of Sastry et al., (hereinafter Sastry, U. S. Patent No. 5,768,300), and further in view of Neimat et al., (hereinafter Neimat, U. S. Patent No. 6,012,059).

As per claim 23, Sato in view of Sastry do not explicitly disclose the process of storing the status code from an output of the remote software module as a dummy transaction in the database and retrieving the status code as the dummy transaction in the database and feeding the retrieved status code for transmission to the base data processing system if the database provides a logical data path of continuity for the status code.

Neimat discloses the process of storing the data message as a dummy transaction in the database and retrieving the data message as the dummy transaction in the database and transmitting the data message to the replicated site (fig. 4 item #56, fig. 6 item #72; col. 4 L13-21 and col. 5 L63-67; col. 4 L30-60). Therefore, it would have been obvious to a person of ordinary skilled in the art at the time the invention was made to modify Neimat to check if the database provides a logical data path continuity for the status code.

One of ordinary skilled in the art would have been motivated because it would have enabled the synchronization of the events in the system (Neimat, col. 4L13-17). It would have also provided an error detecting means and checking the operating status of the database.

Additional references

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- a. Perholtz et al., U. S. Patent No. 5,732,212.
- b. Berstis, U. S. Patent No. 6,137,805.
- c. Hyatt, U. S. Patent No. 4,531,182.
- d. Gill et al., U. S. Patent No. 6,279,826 B1.
- e. Scrandis et al., U. S. Patent No. 6,775,236 B1.
- f. Douik et al., U. S. Patent No. 6,012,152.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

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CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KAMAL B. DIVECHA whose telephone number is 571-272-5863. The examiner can normally be reached on 9.00am-5.30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Zarni Maung can be reached on 571-272-3939. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


ZARNI MAUNG
SUPERVISORY PATENT EXAMINER